



Ameren Illinois

1st Quarter 2013 Smart Grid

Test Bed Report

May15, 2013

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Executive Summary

Ameren Illinois Company (Ameren Illinois) submits the following Smart Grid Test Bed Quarterly Report in accordance with the Energy Infrastructure Modernization Act, (EIMA) 220 ILCS 5/16-108.5 et seq. ("the Act"). This report provides updates on the steps Ameren Illinois has taken to implement its test bed plan during the first quarter of 2013. The report includes information on activities Ameren Illinois has undertaken to design and construct its "primary" test bed location, discussions with potential test bed customers, and on the testing application process.

Test Bed Cost and Construction Status

Status

The completion status for the "primary" Technology Applications Center (TAC) location is as follows:

Engineering Design = 98%
Site Survey = 100%

Site Construction = 90%
Equipment Purchases = 85%

Actual Costs

Provided below are the actual costs incurred through March 31, 2013, for the primary test bed location:

Work Order	Description	Cost
J00BM	Design and construction of substation and control building	\$1,972,605
J00LR	Design and construction of distribution feeders on "primary" TAC site	\$112,275
J022S-J0242	Acquisition of testing infrastructure tools	\$201,287
J00QT	Network Communications	3 ,168
J023B	69KV Line Extension to TAC site	\$16,850
	Total Actual Costs for 2012-2013	\$2,306,185

Estimated - Timeline/Schedule – Primary TAC location

- Site Prep & Foundations: Start - 10/10/12 Finish – 01/15/2013
- U/G Infrastructure: Start - 01/15/2013 Finish – 07/01/2013
- Overhead Infrastructure: Start - 03/01/2013 Finish – 05/10/2013
- Control Building: Start – 01/15/2013 Finish – 05/10/2013

Notes:

1. Estimated in-service of “primary” TAC is currently May 17, 2013.
2. In-service of “secondary” TAC was November 15, 2012.

Test Bed Interest

- Since the last Quarterly Report, Ameren Illinois met with Underwriter Laboratories in Northbrook, IL to discuss opportunities between UL, ComEd, and the Energy Foundry on Smart Grid initiatives. This meeting reviewed several topics, namely as follows: SB1652, Smart Grid Interoperability Program (SGIP 1.0), Interoperability Process Reference Manual, Appliance Standards, along with discussions relating to testing AML meters and PV renewables. The conclusion of the meeting dealt with UL discussing possible business opportunities between our companies. No final direction has been determined to date in this regard.
- After reviewing its initial application Ameren Illinois held a follow up meeting with a major utility equipment provider to determine what equipment would be installed on the Ameren Illinois distribution system. Ameren Illinois had the action item to provide the applicant with electric system one line diagrams for both a simple and more complex electric distribution circuit scheme utilized to provide a project scope proposal for demonstration of FLISR – (Fault Location, Isolation, Service Restoration) and VVO – (Volt Var Optimization) technologies. Ameren Illinois also was to provide a count of the devices (Capacitor Banks, Downstream Reclosers and Regulators) on the circuits depicted in the one line diagrams. These action items were met. Currently Ameren Illinois is waiting for the applicant’s revised application.
- Ameren Illinois, in collaboration with primary research principles – (EPRI, Schweitzer Engineering Laboratories, and Allied Partners) participated in a DOE Cybersecurity Funding Opportunity Announcement. DOE – FOA 797 is designed to address

“Innovation for Increasing Cybersecurity for Energy Delivery Systems” by focusing on six topic areas of Cybersecurity research. Ameren Illinois has agreed to support the primary research principles in their funding applications for three of the six topic areas. The Technology Applications Center will be used to support this research if the grants are received. Ameren Illinois is also supporting a fourth DOE – Funding Opportunity Announcement. DOE – FOA 856 addresses the need to improve upon the incoming electric utility sector professional’s knowledge of renewable energy technologies. The Missouri University of Science & Technology is the primary research principle that Ameren Illinois is collaborating with on its funding opportunity application.

Smart Grid Test Bed Plan Success

Ameren Illinois' commitment to the successful implementation of its Smart Grid Test Bed plan is strong. However, as set forth above, Ameren Illinois reserves the right to modify, amend or alter this plan, as necessary and consistent with the law, to meet the requirements and objectives of the EIMA and other related provisions. Additionally, Ameren Illinois reserves its right to terminate this plan